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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/807,658	08/27/2001	Kazuya Nakada	M 6820 PCT/US	2363

7590 03/02/2004

Henkel Corporation
2500 Renaissance Boulevard Suite 200
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EXAMINER	
OLTMANS, ANDREW L	
ART UNIT	**PAPER NUMBER**
1742	

DATE MAILED: 03/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/807,658	NAKADA, KAZUYA	
	Examiner	Art Unit	
	Andrew L Oltmans	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 10-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 10-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

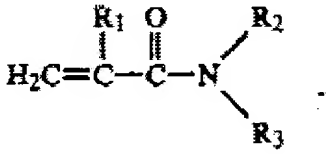
> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Sako et al. 4,954,372 in view of Japanese Patent JP 06-116527 A

2. Claims 1, 10-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sako et al. 4,954,372 (Sako; cited on IDS filed December 7, 2001) in view of Japanese Patent JP 06-116527 A (JP '527; cited on IDS filed December 7, 2001).

Sako teaches a coated hydrophilic metallic material, a method of forming the coated material and the composition used in the process of forming the coated material wherein the coated material is useful as a heat exchanger and the method of coating includes a step of degreasing, pre-treating with a conversion coating, coating with a hydrophilic composition, and drying, as recited in claims 14-16, 28-29, 31-32 (col 1, lines 7-14; col 4, lines 17, col 8, lines 63-66). Sako teaches that the coating composition includes a first polymer (corresponding to component A instantly claimed), a second polymer (corresponding to component B instantly claimed) and a crosslinking agent, as recited in claim 1, as recited in claims 1, 10-11, 20-26 and 35-36 (col 4):

(a) a first water-soluble polymer having a chemical structure formally obtainable by polymerizing a mixture of molecules all containing addition-polymerizable carbon-carbon double bonds, wherein at least 40 number percent of the molecules in the mixture have a structure according to the general formula (I)



(I)

wherein R_1 represents H or CH_3; R_2 and R_3 each independently represents H, alkyl having 1 to 4 carbon atoms, benzyl, or hydroxyalkyl having 2 or 3 carbon atoms;

(b) a second water-soluble polymer having a chemical structure formally obtainable by polymerizing a mixture of molecules all containing addition-polymerizable carbon-carbon double bonds, wherein at least 60 number percent of the molecules in the mixture also contain a moiety selected from the group consisting of carboxyl groups, carboxylate salts, sulfonic acid group, sulfonate salts, phosphonic acid group, phosphonate salts, amino groups, salts of amino groups, and quaternary ammonium groups; and

(c) a water-soluble crosslinking agent which is cosoluble with both (a) and (b).

[see also col 4, line 55 to col 6, line 37]

Sako teaches that crosslinking agent may include a metal ion, including vanadium, titanium and zirconium (col 7, lines 4-32). Sako also teaches the addition of the ingredient recited in claim 12 (col 8, lines 46-51). Sako teaches compositional ranges that appear to overlap those instantly claimed in claims 13, 17-19, 27 and 34 (col 7, lines 50-54; col 8, lines 6-26 and Sako: claim 10).

Sako teaches a thickness for the hydrophilic coating that encompasses the range instantly claimed in claims 30 and 33 (col 8, lines 59-60).

Although Sako teaches the inclusion of a crosslinking agent selected from a list of metals including vanadium, titanium and zirconium, Sako fails to meet all the limitations of the instant claims in that Sako does not explicitly teach the combination of vanadium with titanium, zirconium or silicon. Sako also fails to teach the exact same ranges of composition.

JP '527 teaches crosslinking agents for hydrophilic polymer compositions, wherein the crosslinking agents include vanadium (see abstract), with compounds including silicon (see abstract), titanium and zirconium (see paragraph [0013] of English language translation). JP '527 teaches that the combination of vanadium with titanium (fluoride), zirconium (fluoride) or silicon (silica or fluoride) work together to provide the hydrophilic coating with excellent endurance and corrosion resistance (see paragraph [0013] of English language translation). With respect to the limitation of being free of alkali silicate, JP '527 does not require the inclusion of alkali silicate, but merely recites alkali silicate as an alternative (see e.g. paragraph [0011]).

One of ordinary skill in the art at the time that the invention was made would have found the selection of vanadium in combination with titanium, zirconium or silicon as the crosslinking agents of Sako obvious because one of ordinary skill in the art would have been motivated to provide Sako with the desirable properties that result when vanadium is used together with titanium (fluoride), zirconium (fluoride) or silicon (silica or fluoride), including excellent endurance and corrosion resistance, as taught in JP '527.

With respect to the compositional ranges, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the

coating compositions taught by the reference overlap that of the instant claims, In re Malagari, 182 USPQ 549, and MPEP 2144.05.

With respect to the transitional phrase of claim 35, "consisting essentially of", the phrase does not patentably distinguish over the prior art because the claim language remains open to elements that do not materially affect the basic and novel characteristics of the claim, MPEP 2111.03. In this case, Sako and JP '527 do not require non-claimed elements that materially affect the basic and novel characteristics of the claimed composition.

Response to Arguments

3. Applicant's arguments filed December 15, 2003 have been fully considered but they are not persuasive. Claims 1 and 10-36 remain pending in this application. The rejections made in the previous Office Action have been maintained and amended, as appropriate, in view of applicant's amendment.

4. With respect to applicant's argument that there is no motivation to combine references, as recited in the previous rejection, one of ordinary skill in the art would have been *motivated* to provide Sako with the desirable properties that result when vanadium is used together with titanium (fluoride), zirconium (fluoride) or silicon (silica or fluoride), including excellent endurance and corrosion resistance, as taught in JP '527, by adding the complexing agent taught therein. Therefore, applicant's assertion that there is no motivation to combine is not persuasive. Further, the examiner notes that both compositions are hydrophilic polymer containing compositions utilized for coating metallic surfaces. In view of the similar composition and use, one of ordinary skill in the art would find a reasonable expectation of success in the combination.

Therefore, for the reasons set forth in the previous Office Action, the claimed invention is obvious.

5. With respect to the limitation "free of chromium and alkali silicate", the claims are not unobvious over the teachings of Sako and JP '527 because Sako and JP '527 do not require Cr. JP '527 does not suggest the addition of chromium at all. JP '527 does not require alkali silicate, and teaches it as merely and alternative to other silicon compounds taught (see e.g. JP '527 paragraph [0011]). Sako does not teach the addition of alkali silicate at all. Although Sako teaches the use of chromium in some embodiment and in compositions applied prior to the application of the coating composition, as pointed out by applicant, with respect to vanadium, titanium and zirconium, chromium is one of a list of elements that can be used (see Table 1). Although chromium is taught in the embodiments, Sako is not limited to the preferred embodiments, but rather is read as a whole, MPEP 2123:

> "The use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain." In re Heck, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting In re Lemelson, 397 F.2d 1006, 1009,158 USPQ 275, 277 (CCPA 1968)).
>
> A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. Merck & Co. v. Biocraft Laboratories, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989).

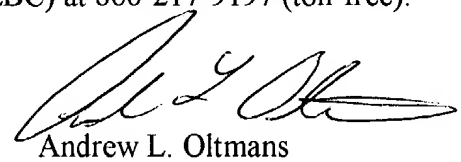
If Sako is read as a whole, the composition free of chromium is taught, therefore making the instant invention obvious. Likewise, with respect to alkali silicate, JP '527 read as a whole, includes compositions free of alkali silicate.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew L Oltmans whose telephone number is 571-272-1248. The examiner can normally be reached from 7:00 to 3:30, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Andrew L. Oltmans
Patent Examiner
Art Unit 1742

/alo